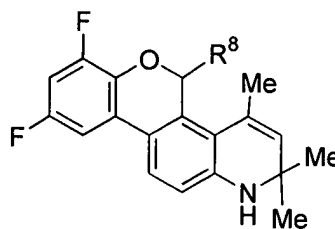


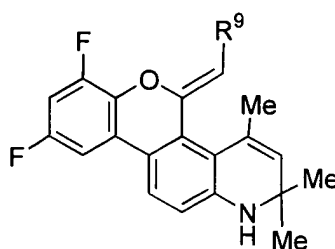
What is claimed is:

1. A compound of the formula:



(I)

5 or



(II)

wherein:

$R^8$  is selected from the group of  $C_1$ – $C_{12}$  alkyl,  $C_1$ – $C_{12}$  heteroalkyl,  $C_1$ – $C_{12}$  haloalkyl,  $C_2$ – $C_{12}$  alkenyl,  $C_2$ – $C_{12}$  heteroalkenyl,  $C_2$ – $C_{12}$  haloalkenyl,  $C_2$ – $C_{12}$  alkynyl,  $C_2$ – $C_{12}$  heteroalkynyl,  $C_2$ – $C_{12}$  haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen,  $C_1$ – $C_4$  alkyl, F, Cl, Br, I, CN,  $NO_2$ ,  $NH_2$ ,  $NHCH_3$ ,  $N(CH_3)_2$ , SH,  $SCH_3$ , OH,  $OCH_3$ ,  $OCF_3$ ,  $CF_3$ ,  $C(O)CH_3$ ,  $CO_2CH_3$ ,  $C(O)NH_2$ ,  $OR^{10}$ ,  $SR^{10}$ , and  $NR^{10}R^{11}$ ;

$R^9$  is selected from the group of hydrogen, F, Cl, Br, I, CN,  $C_1$ – $C_8$  alkyl,  $C_1$ – $C_8$  heteroalkyl,  $C_1$ – $C_8$  haloalkyl,  $C_2$ – $C_8$  alkenyl or cycloalkenyl,  $C_2$ – $C_8$  heteroalkenyl,  $C_2$ – $C_8$  haloalkenyl,  $C_2$ – $C_8$  alkynyl,  $C_2$ – $C_8$  heteroalkynyl,  $C_2$ – $C_8$  haloalkynyl, aryl and

heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>;

5           R<sup>10</sup> and R<sup>11</sup> each independently is hydrogen, or C<sub>1</sub>–C<sub>4</sub> alkyl;

or a pharmaceutically acceptable salt or prodrug thereof.

2.       A compound according to claim 1, wherein R<sup>8</sup> is selected from the group of C<sub>1</sub>–C<sub>8</sub> alkyl, C<sub>1</sub>–C<sub>8</sub> heteroalkyl, C<sub>1</sub>–C<sub>8</sub> haloalkyl, C<sub>2</sub>–C<sub>8</sub> alkenyl, C<sub>2</sub>–C<sub>8</sub> heteroalkenyl, C<sub>2</sub>–C<sub>8</sub> haloalkenyl, C<sub>2</sub>–C<sub>8</sub> alkynyl, C<sub>2</sub>–C<sub>8</sub> heteroalkynyl, C<sub>2</sub>–C<sub>8</sub> haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>.

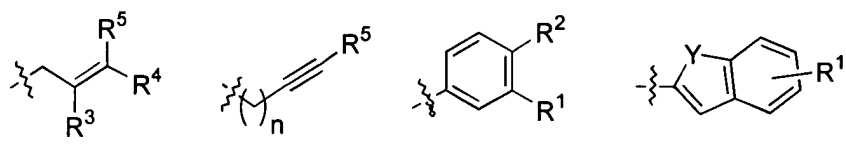
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3.       A compound according to claim 2, wherein R<sup>8</sup> is selected from the group of C<sub>1</sub>–C<sub>4</sub> alkyl, C<sub>1</sub>–C<sub>4</sub> heteroalkyl, C<sub>1</sub>–C<sub>4</sub> haloalkyl, C<sub>2</sub>–C<sub>4</sub> alkenyl, C<sub>2</sub>–C<sub>4</sub> heteroalkenyl, C<sub>2</sub>–C<sub>4</sub> haloalkenyl, C<sub>2</sub>–C<sub>4</sub> alkynyl, C<sub>2</sub>–C<sub>4</sub> heteroalkynyl, and C<sub>2</sub>–C<sub>4</sub> haloalkynyl.

15

4. A compound according to claim 2, wherein  $R^8$  is selected from the group of aryl and heteroaryl radicals, wherein said aryl and heteroaryl radicals are optionally substituted with one or more substituents independently selected from the group of hydrogen,  $C_1$ – $C_4$  alkyl, F, Cl, Br, CN,  $NH_2$ ,  $NHCH_3$ ,  $N(CH_3)_2$ , SH,  $SCH_3$ , OH,  $OCH_3$ ,  
5  $OCF_3$ ,  $CF_3$ ,  $C(O)CH_3$ ,  $OR^{10}$ ,  $SR^{10}$ , and  $NR^{10}R^{11}$ .

5. A compound according to claim 2, wherein  $R^8$  is selected from the group of



$R^1$  and  $R^2$  each independently is selected from the group of hydrogen, F, Cl, Br  
10 and  $C_1$ – $C_4$  alkyl;

$R^3$  through  $R^5$  each independently is selected from group of hydrogen, F, Cl, and  
 $C_1$ – $C_4$  alkyl;

$n$  is 0 or 1; and

$Y$  is selected from the group of O, S, and  $NR^{10}$ .

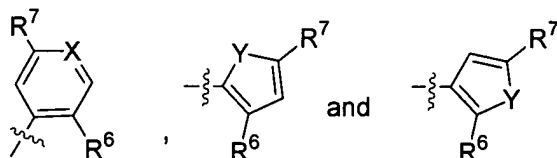
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6. A compound according to claim 1, wherein  $R^9$  is selected from the group of hydrogen, F, Cl, Br, CN,  $C_1-C_6$  alkyl,  $C_1-C_6$  heteroalkyl,  $C_1-C_6$  haloalkyl,  $C_2-C_6$  alkenyl or cycloalkenyl,  $C_2-C_6$  heteroalkenyl,  $C_2-C_6$  haloalkenyl,  $C_2-C_6$  alkynyl,  $C_2-C_6$  heteroalkynyl,  $C_2-C_6$  haloalkynyl, aryl and heteroaryl optionally substituted with one or  
5 more substituents independently selected from the group of hydrogen,  $C_1-C_4$  alkyl, F, Cl, Br, I, CN,  $NO_2$ ,  $NH_2$ ,  $NHCH_3$ ,  $N(CH_3)_2$ , SH,  $SCH_3$ , OH,  $OCH_3$ ,  $OCF_3$ ,  $CF_3$ ,  $C(O)CH_3$ ,  $CO_2CH_3$ ,  $C(O)NH_2$ ,  $OR^{10}$ ,  $SR^{10}$ , and  $NR^{10}R^{11}$ .

7. A compound according to claim 6, wherein  $R^9$  is selected from the group of hydrogen, Br, Cl,  $C_1-C_4$  alkyl,  $C_1-C_4$  heteroalkyl,  $C_1-C_4$  haloalkyl,  $C_2-C_4$  alkenyl,  
10  $C_2-C_4$  heteroalkenyl,  $C_2-C_4$  haloalkenyl,  $C_2-C_4$  alkynyl and  $C_2-C_4$  heteroalkynyl,  $C_2-C_4$  haloalkynyl.

8. A compound according to claim 6, wherein  $R^9$  is selected from the group of aryl and heteroaryl radicals, wherein said aryl and heteroaryl radicals are optionally substituted with one or more substituents independently selected from the group of  
15 hydrogen,  $C_1-C_4$  alkyl, F, Cl, Br, CN,  $NH_2$ ,  $NHCH_3$ ,  $N(CH_3)_2$ , SH,  $SCH_3$ , OH,  $OCH_3$ ,  $OCF_3$ ,  $OR^{10}$ ,  $SR^{10}$ , and  $NR^{10}R^{11}$ .

9. A compound according to claim 6, wherein R<sup>9</sup> is selected from the group  
of



R<sup>6</sup> is selected from the group of hydrogen, F, Cl, Br, C<sub>1</sub>–C<sub>4</sub> alkyl, OR<sup>10</sup>, SR<sup>10</sup>,  
5 and NR<sup>10</sup>R<sup>11</sup>;

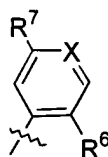
R<sup>7</sup> is hydrogen, F, or Cl;

R<sup>10</sup> and R<sup>11</sup> each independently is hydrogen, or C<sub>1</sub>–C<sub>4</sub> alkyl;

X is CH or N; and

Y is selected from the group of O, S, and NR<sup>10</sup>.

10. A compound according to claim 9, wherein R<sup>9</sup> is



R<sup>6</sup> is selected from the group of hydrogen, F, Cl, C<sub>1</sub>–C<sub>4</sub> alkyl, OMe, OEt,  
NHMe, and NMe<sub>2</sub>;

R<sup>7</sup> is hydrogen, F, or Cl; and

X is CH or N.

11. A compound according to claim 9, where R<sup>6</sup> is selected from the group of F, Me, Et, OMe, OEt, SMe, and NMe<sub>2</sub>.

5 12. A compound according to claim 1, wherein said compound is selected from the group of:

7,9-difluoro-5(*Z*)-benzylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 10);

10 7,9-difluoro-5(*Z*)-(2-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 12);

7,9-difluoro-5(*Z*)-(2-chlorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 13);

7,9-difluoro-5(*Z*)-(4-picolyidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 14);

15 7,9-difluoro-5(*Z*)-(3-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 15);

7,9-difluoro-5(*Z*)-(4-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **16**);

7,9-difluoro-5(*Z*)-(2,5-difluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **17**);

5        7,9-difluoro-5(*Z*)-(2-methoxybenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **18**);

7,9-difluoro-5(*Z*)-(2-methyl-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-  
5*H*-chromeno[3,4-*f*]quinoline (Compound **19**);

10       7,9-difluoro-5(*Z*)-(3-methyl-4-picolylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **20**);

7,9-difluoro-5(*Z*)-(2-methyl-3-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-  
5*H*-chromeno[3,4-*f*]quinoline (Compound **21**);

7,9-difluoro-5(*Z*)-(3-methyl-2-picolylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **22**);

15       7,9-difluoro-5(*Z*)-(2,3-dimethylbenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **23**);

7,9-difluoro-5(*Z*)-cyanomethylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **24**);

7,9-difluoro-5(*Z*)-hexylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **25**);

7,9-difluoro-5(*Z*)-(2-methoxy-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **26**);

5        7,9-difluoro-5(*Z*)-(2,4,5-trifluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **27**);

7,9-difluoro-5-methylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **28**);

10       7,9-difluoro-5(*Z*)-bromomethylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **29**);

7,9-difluoro-5(*Z*)-(3-thienylmethylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **30**);

7,9-difluoro-5(*Z*)-(2-thienylmethylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **31**);

15       (±)-7,9-difluoro-5-methoxy-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **32**);

(±)-7,9-difluoro-5-phenyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **33**);



(±)-7,9-difluoro-5-(3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **34**);

(±)-7,9-difluoro-5-(1,3-benzodioxol-5-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **35**);

5       (±)-7,9-difluoro-5-(4-bromophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **36**);

(±)-7,9-difluoro-5-(4-chloro-3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **37**);

10       (-)-7,9-difluoro-5-(4-chloro-3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **38**);

(+)-7,9-difluoro-5-(4-chloro-3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **39**);

(±)-7,9-difluoro-5-(3-fluorophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **40**);

15       (±)-7,9-difluoro-5-(3-chlorophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **41**);

(±)-7,9-difluoro-5-(3-bromophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-*f*]quinoline (Compound **42**);

(±)-7,9-difluoro-5-(4-chlorophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **43**);

(±)-7,9-difluoro-1,2-dihydro-2,2,4,5-tetramethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **44**);

5        (±)-7,9-difluoro-5-(2-oxo-2-phenylethyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **45**);

(±)-7,9-difluoro-5-ethyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **46**);

10       (±)-7,9-difluoro-5-ethenyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **47**);

(±)-7,9-difluoro-5-(2-oxo-3-butenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **48**);

(±)-7,9-difluoro-1,2-dihydro- $\alpha,\alpha,2,2,4$ -pentamethyl-5*H*-chromeno[3,4-*f*]quinoline-5-ethanoate (Compound **49**);

15       (±)-7,9-difluoro-5-ethynyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **50**);

(±)-7,9-difluoro-5-cyano-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **51**);

(±)-7,9-difluoro-5-butyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline (Compound **52**);

(±)-7,9-difluoro-5-(2-thienyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline (Compound **53**);

5 (±)-7,9-difluoro-5-(2-furyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline (Compound **54**);

(±)-7,9-difluoro-5-allyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline (Compound **55**);

(±)-7,9-difluoro-5-[3-(trifluoromethyl)phenyl]-1,2-dihydro-2,2,4-trimethyl-5*H*-  
10 chromeno[3,4-f]quinoline (Compound **56**);

Ethyl (±)-7,9-difluoro-1,2-dihydro- $\alpha$ -methylene-2,2,4-trimethyl-5*H*-  
chromeno[3,4-f]quinoline-5-propanoate (Compound **57**);

(±)-7,9-difluoro-1,2-dihydro- $\beta$ -methylene-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline-5-propanol (Compound **58**);

15 (±)-7,9-difluoro-1,2-dihydro- $\beta$ -methylene-2,2,4-trimethyl-5*H*-chromeno[3,4-  
f]quinoline-5-propanol acetate (Compound **59**);

(±)-7,9-difluoro-5-(1-methylethenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
chromeno[3,4-f]quinoline (Compound **60**);

(±)-7,9-difluoro-5-(N-methyl-2-pyrrolyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **61**);

(±)-7,9-difluoro-5-phenylethynyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **62**);

5       (±)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **63**);

(-)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **64**);

(+)-7,9-difluoro-5-(benzo[*b*]thie-2yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
10 chromeno[3,4-*f*]quinoline (Compound **65**);

(±)-7,9-difluoro-5-(5-methyl-2-furyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **66**);

(±)-7,9-difluoro-5-(2-benzo[*b*]furyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **67**);

15       (±)-7,9-difluoro-5-[4-(dimethylamino)phenyl]-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **68**);

(±)-7,9-difluoro-5-(5-methyl-2-thienyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **69**);

(±)-7,9-difluoro-5-(5-methoxy-2-furyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **70**);

(±)-7,9-difluoro-5-(2-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **71**);

5        (-)-7,9-difluoro-5-(2-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **72**);

(+)-7,9-difluoro-5-(2-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **73**);

10        (±)-7,9-difluoro-5-(1-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **74**);

(-)-7,9-difluoro-5-(1-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **75**);

(+)-7,9-difluoro-5-(1-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **76**);

15        (±)-7,9-difluoro-5-(4,5-dimethyl-2-furyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **77**);

(±)-7,9-difluoro-5-(2-methyl-1-propenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **78**);

(±)-7,9-difluoro-5-(3,4-dimethyl-2-thienyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **79**);

(±)-7,9-difluoro-5-(3-(3-bromophenyl)phenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **80**); and

5        7,9-difluoro-5-(2-methylbenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **81**).

13.     A compound according to claim 1, wherein said compound is selected from the group of:

7,9-difluoro-5(*Z*)-benzylidene-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **10**);

7,9-difluoro-5(*Z*)-(2-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **12**);

7,9-difluoro-5(*Z*)-(3-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **15**);

15        7,9-difluoro-5(*Z*)-(2,5-difluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **17**);

7,9-difluoro-5(*Z*)-(2-methoxybenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **18**);

7,9-difluoro-5(*Z*)-(2-methyl-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **19**);

7,9-difluoro-5(*Z*)-(3-methyl-4-picolylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **20**);

5        7,9-difluoro-5(*Z*)-(2-methoxy-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **26**);

7,9-difluoro-5(*Z*)-(3-thienylmethylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **30**);

10       7,9-difluoro-5(*Z*)-(2-thienylmethylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **31**);

(±)-7,9-difluoro-5-(3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **34**);

(-)-7,9-difluoro-5-(4-chloro-3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **38**);

15       (±)-7,9-difluoro-5-(3-chlorophenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **41**);

(±)-7,9-difluoro-1,2-dihydro-2,2,4,5-tetramethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **44**);

(±)-7,9-difluoro-5-allyl-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **55**);

(±)-7,9-difluoro-5-(3-trifluoromethylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **56**);

5       (±)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **63**);

(-)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **64**);

(+)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-  
10 chromeno[3,4-*f*]quinoline (Compound **65**);

(-)-7,9-difluoro-5-(2-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **72**);

(-)-7,9-difluoro-5-(1-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **75**); and

15       7,9-difluoro-5-(2-methylbenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound **81**).



14. A compound according to claim 1, wherein said compound is selected from the group of:

7,9-difluoro-5(*Z*)-(2,5-difluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 17);

5 7,9-difluoro-5(*Z*)-(2-methyl-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 19);

7,9-difluoro-5(*Z*)-(3-methyl-4-picolyldiene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 20);

10 7,9-difluoro-5(*Z*)-(2-methoxy-5-fluorobenzylidene)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 26);

(-)-7,9-difluoro-5-(4-chloro-3-methylphenyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 38);

(±)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 63);

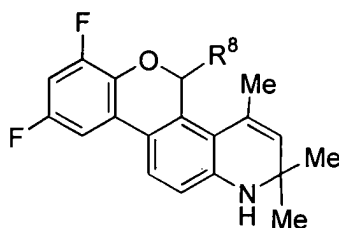
15 (-)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 64);

(+)-7,9-difluoro-5-(benzo[*b*]thien-2-yl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 65); and

(-)-7,9-difluoro-5-(2-propynyl)-1,2-dihydro-2,2,4-trimethyl-5*H*-chromeno[3,4-*f*]quinoline (Compound 72).

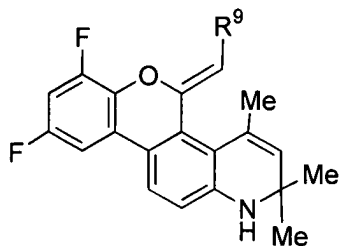
15. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound of formula:

5



(I)

or



(II)

10

wherein:

R<sup>8</sup> is selected from the group of C<sub>1</sub>–C<sub>12</sub> alkyl, C<sub>1</sub>–C<sub>12</sub> heteroalkyl, C<sub>1</sub>–C<sub>12</sub> haloalkyl, C<sub>2</sub>–C<sub>12</sub> alkenyl, C<sub>2</sub>–C<sub>12</sub> heteroalkenyl, C<sub>2</sub>–C<sub>12</sub> haloalkenyl, C<sub>2</sub>–C<sub>12</sub> alkynyl, C<sub>2</sub>–C<sub>12</sub> heteroalkynyl, C<sub>2</sub>–C<sub>12</sub> haloalkynyl, aryl and heteroaryl optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>;

15

R<sup>9</sup> is selected from the group of hydrogen, F, Cl, Br, I, CN, C<sub>1</sub>–C<sub>8</sub> alkyl, C<sub>1</sub>–C<sub>8</sub> heteroalkyl, C<sub>1</sub>–C<sub>8</sub> haloalkyl, C<sub>2</sub>–C<sub>8</sub> alkenyl or cycloalkenyl, C<sub>2</sub>–C<sub>8</sub> heteroalkenyl, C<sub>2</sub>–C<sub>8</sub> haloalkenyl, C<sub>2</sub>–C<sub>8</sub> alkynyl, C<sub>2</sub>–C<sub>8</sub> heteroalkynyl, C<sub>2</sub>–C<sub>8</sub> haloalkynyl, aryl and heteroaryl optionally substituted with one or more substituents independently selected  
5 from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>;

R<sup>10</sup> and R<sup>11</sup> each independently is hydrogen, or C<sub>1</sub>–C<sub>4</sub> alkyl;

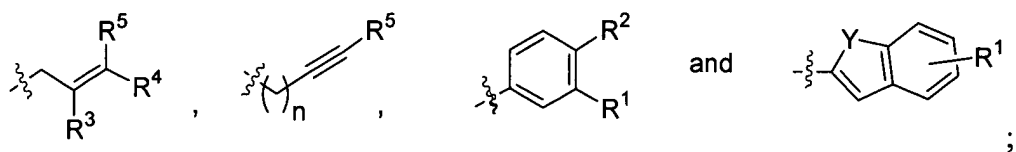
or a pharmaceutically acceptable salt or prodrug thereof.

10 16. A pharmaceutical composition according to claim 15, wherein R<sup>8</sup> is selected from the group of C<sub>1</sub>–C<sub>8</sub> alkyl, C<sub>1</sub>–C<sub>8</sub> heteroalkyl, C<sub>1</sub>–C<sub>8</sub> haloalkyl, C<sub>2</sub>–C<sub>8</sub> alkenyl, C<sub>2</sub>–C<sub>8</sub> heteroalkenyl, C<sub>2</sub>–C<sub>8</sub> haloalkenyl, C<sub>2</sub>–C<sub>8</sub> alkynyl, C<sub>2</sub>–C<sub>8</sub> heteroalkynyl, C<sub>2</sub>–C<sub>8</sub> haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br,  
15 I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>.

17. A pharmaceutical composition according to claim 16, wherein  $R^8$  is selected from the group of  $C_1$ – $C_4$  alkyl,  $C_1$ – $C_4$  heteroalkyl,  $C_1$ – $C_4$  haloalkyl,  $C_2$ – $C_4$  alkenyl,  $C_2$ – $C_4$  heteroalkenyl,  $C_2$ – $C_4$  haloalkenyl, and  $C_2$ – $C_4$  alkynyl,  $C_2$ – $C_4$  heteroalkynyl and  $C_2$ – $C_4$  haloalkynyl.

5 18. A pharmaceutical composition according to claim 16, wherein  $R^8$  is selected from the group of aryl and heteroaryl radicals, wherein said aryl and heteroaryl radicals are optionally substituted with one or more substituents independently selected from the group of hydrogen,  $C_1$ – $C_4$  alkyl, F, Cl, Br, CN,  $NH_2$ ,  $NHCH_3$ ,  $N(CH_3)_2$ , SH,  $SCH_3$ , OH,  $OCH_3$ ,  $OCF_3$ ,  $CF_3$ ,  $C(O)CH_3$ ,  $OR^{10}$ ,  $SR^{10}$ , and  $NR^{10}R^{11}$ .

10 19. A pharmaceutical composition according to claim 16, wherein  $R^8$  is selected from the group of



$R^1$  and  $R^2$  each independently is selected from the group of hydrogen, F, Cl, Br and  $C_1$ – $C_4$  alkyl;

15  $R^3$  through  $R^5$  each independently is selected from the group of hydrogen, F, Cl, and  $C_1$ – $C_4$  alkyl;

$n$  is 0 or 1; and

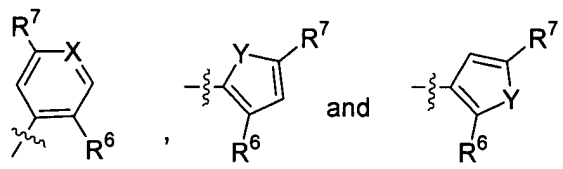
Y is selected from the group of O, S, and NR<sup>10</sup>.

20. A pharmaceutical composition according to claim 15, wherein R<sup>9</sup> is selected from the group of hydrogen, F, Cl, Br, CN, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> heteroalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl or cycloalkenyl, C<sub>2</sub>-C<sub>6</sub> heteroalkenyl, C<sub>2</sub>-C<sub>6</sub> haloalkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>2</sub>-C<sub>6</sub> heteroalkynyl, C<sub>2</sub>-C<sub>6</sub> haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>.

21. A pharmaceutical composition according to claim 20, wherein R<sup>9</sup> is selected from the group of hydrogen, Br, Cl, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> heteroalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> heteroalkenyl, C<sub>2</sub>-C<sub>4</sub> haloalkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>2</sub>-C<sub>4</sub> heteroalkynyl, and C<sub>2</sub>-C<sub>4</sub> haloalkynyl.

22. A pharmaceutical composition according to claim 20, wherein R<sup>9</sup> is selected from the group of aryl and heteroaryl radicals, wherein said aryl and heteroaryl radicals are optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, CN, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>.

23. A pharmaceutical composition according to claim 22, wherein R<sup>9</sup> is selected from the group of



R<sup>6</sup> is selected from the group of hydrogen, F, Cl, Br, C<sub>1</sub>–C<sub>4</sub> alkyl, OR<sup>10</sup>, SR<sup>10</sup>,  
5 and NR<sup>10</sup>R<sup>11</sup>;

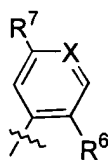
R<sup>7</sup> is hydrogen, F, or Cl;

R<sup>10</sup> and R<sup>11</sup> each independently is hydrogen, or C<sub>1</sub>–C<sub>4</sub> alkyl;

X is CH or N; and

Y is selected from group of O, S, and NR<sup>10</sup>.

10 24. A pharmaceutical composition according to claim 23, wherein R<sup>9</sup> is



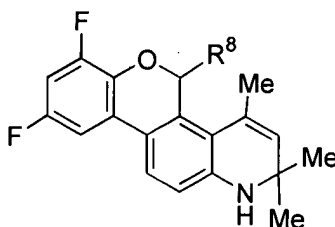
R<sup>6</sup> is selected from the group of hydrogen, F, Cl, C<sub>1</sub>–C<sub>4</sub> alkyl, OMe, OEt,  
NHMe, and NMe<sub>2</sub>; and

R<sup>7</sup> is hydrogen, F, or Cl.

25. A pharmaceutical composition according to claim 23, where R<sup>6</sup> is selected from the group of F, Me, Et, OMe, OEt, SMe, and NMe<sub>2</sub>.

26. A method of treating an individual having a condition mediated by a progesterone receptor comprising administering to said individual a pharmaceutically effective amount of a compound according to any one of claims 1 to 14.

27. A method according to claim 26, wherein said compound is represented by formula (I):

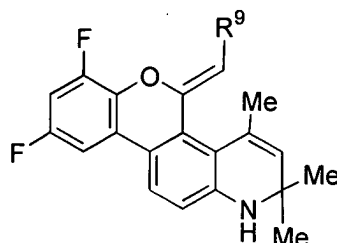


10 wherein:

R<sup>8</sup> is selected from the group of C<sub>1</sub>–C<sub>12</sub> alkyl, C<sub>1</sub>–C<sub>12</sub> heteroalkyl, C<sub>1</sub>–C<sub>12</sub> haloalkyl, C<sub>2</sub>–C<sub>12</sub> alkenyl, C<sub>2</sub>–C<sub>12</sub> heteroalkenyl, C<sub>2</sub>–C<sub>12</sub> haloalkenyl, C<sub>2</sub>–C<sub>12</sub> alkynyl, C<sub>2</sub>–C<sub>12</sub> heteroalkynyl, C<sub>2</sub>–C<sub>12</sub> haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>;

or a pharmaceutically acceptable salt or prodrug thereof.

28. A method according to claim 26, wherein said compound is represented by formula (II):



(II)

5 wherein:

R<sup>9</sup> is selected from the group of hydrogen, F, Cl, Br, I, CN, C<sub>1</sub>–C<sub>8</sub> alkyl, C<sub>1</sub>–C<sub>8</sub> heteroalkyl, C<sub>1</sub>–C<sub>8</sub> haloalkyl, C<sub>2</sub>–C<sub>8</sub> alkenyl or cycloalkenyl, C<sub>2</sub>–C<sub>8</sub> heteroalkenyl, C<sub>2</sub>–C<sub>8</sub> haloalkenyl, C<sub>2</sub>–C<sub>8</sub> alkynyl, C<sub>2</sub>–C<sub>8</sub> heteroalkynyl, C<sub>2</sub>–C<sub>8</sub> haloalkynyl, aryl and heteroaryl, optionally substituted with one or more substituents independently selected from the group of hydrogen, C<sub>1</sub>–C<sub>4</sub> alkyl, F, Cl, Br, I, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, OH, OCH<sub>3</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, C(O)CH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, OR<sup>10</sup>, SR<sup>10</sup>, and NR<sup>10</sup>R<sup>11</sup>;

or a pharmaceutically acceptable salt or prodrug thereof.

29. A method according to claim 26, wherein said condition is selected from the group of dysfunctional uterine bleeding, dysmenorrhea, endometriosis, leiomyomas (uterine fibroids), hot flushes, mood disorders, meningiomas, hormone-dependent cancers, and female osteoporosis.



30. A method of modulating fertility in an individual comprising administering to said individual a pharmaceutically effective amount of a compound according to any one of claims 1 to 25.

31. A method of providing contraception in an individual comprising  
5 administering to said individual a pharmaceutically effective amount of a compound according to any one of claims 1 to 25.

32. A method according to claim 26, wherein said condition is alleviated with female hormone replacement therapy.

33. A method of modulating a progesterone receptor in an individual  
10 comprising administering a progesterone modulating effective amount of a compound according to any one of claims 1 to 25.

34. A method according to claim 33, wherein said modulation is activation.

35. A method according to claim 34, wherein said compound provides at least 50% maximal activation of the progesterone receptor at a blood plasma  
15 concentration of less than 100 nM.

36. A method according to claim 34, wherein said compound provides at least 50% maximal activation of the progesterone receptor at a blood plasma concentration of less than 50 nM.

37. A method according to claim 34, wherein said compound provides at least 50% maximal activation of the progesterone receptor at a blood plasma concentration of less than 20 nM.

38. A method according to claim 34, wherein said compound provides at  
5 least 50% maximal activation of the progesterone receptor at a blood plasma concentration of less than 10 nM.

39. A method of treating an individual having cancer comprising administering to said individual a pharmaceutically effective amount of a compound according to any one of claims 1 to 25.

10 40. A method of determining the presence of a progesterone receptor in a cell or cell extract comprising (a) labeling a compound according to any one of claims 1 to 25; (b) contracting the cell or cell extract with said labeled compound; and (c) testing the contracted cell or cell extract to determine the presence of progesterone receptor.